10/534035

JC20 Rec'd PCT/PTO 0 6 MAY 2005

WSGL WEINGARTEN, SCHURGIN, GAGNEBIN & LEBOVICI LLP

Intellectual Property Law
Patents • Trademarks • Copyrights

Ten Post Office Square
Boston, Massachusetts 02109
Tel. 617.542.2290 • Fax. 617.451.0313
www.wsglip.com

February 18, 2005

Mail Stop PCT
Commissioner for Patents
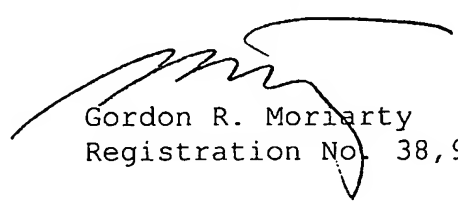P.O. Box 1450
Alexandria, VA 22313-1450

Re: International Application No. : PCT/US03/35395
    International Filing Date : 06 November 2003
    Entitled : ANALYSIS OF GEOMETRIC SURFACES BY
    CONFORMAL STRUCTURE
    Applicant : Geometric Informatics Inc.
    Agent File Ref : GIT-001Xq999

Dear Sir:

Enclosed is an Article 34 amendment consisting of 1 page of Remarks, replacement pages 42-61 of amended claims 1-47. Claim 1 has been cancelled and claims 2-47 have been added.

If a fee is required, the Commissioner is hereby authorized to charge the payment of such fee to Deposit Account No. 23-0804.

Respectfully submitted,

Gordon R. Moriarty
Registration No. 38,973

GRM/jow
317630-1

Enclosures
VIA EXPRESS MAIL

R E M A R K S

Please cancel claim 1 as filed and add new claims 2 through 47. No new subject matter is added to the application by way of this amendment.

The claims of the instant patent application have been amended in order to more comprehensively recite the inventive subject matter disclosed herein.

CLAIMS

What is claimed is:

1.   A method for matching first and second surfaces, the method
comprising:

receiving first and second mesh representations of said
first and second surfaces, respectively;

conformally mapping both of said first and second mesh
representations to a first canonical parameter domain forming
first and second mapped surfaces;

computing first and second conformal parameterizations of
said first and second mapped surfaces, respectively;

computing first and second level sets of Gaussian curvature
and mean curvature for said first and second mapped surfaces,
respectively, wherein said first and second level sets of Gaussian
curvature and mean curvature are a function of said first and
second conformal parameterizations, respectively; and

comparing said first and second level sets of Gaussian
curvature and mean curvature and in the event that the comparison
exceeds a predetermined threshold, declare a match between said
first and second surfaces, otherwise declare a mismatch between
said first and second surfaces.